

NSF 13-537 Program Solicitation

George E. Brown, Jr. Network for Earthquake Engineering Simulation Operations

FY 2015-FY 2019 (NEES2 Ops)



Joy M. Pauschke
Program Director
Division of Civil, Mechanical and Manufacturing Innovation
National Science Foundation
jpauschk@nsf.gov

Informational Webinar
March 13, 2013



Question & Answer Session at End of Webinar

Submit questions via email to:

NEES2@nsf.gov

(This email alias is only active during this webinar)



Webinar Outline

- Introduction
- Program Description
- Proposal Preparation
 - Eligibility
 - Letter of Intent (required)
 - Full Proposal
- Award and Budget Information
- NSF Merit Review Criteria and Process
- Award Conditions/Post-award oversight/Reporting
- Contact information
- Q&A



INTRODUCTION



NEES2 Ops (NSF 13-537)

NSF Home Page

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503259&org=ENG&from=home

- NSF 13-537 Solicitation

(clarifications added – suggest reprint/reread solicitation)

http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf13537

- Frequently Asked Questions (FAQ) – when available
- Resource Library – for LOI submissions
- March 13, 2013 webinar slides

Note: This webinar highlights many items in NSF 13-537, but not all; please refer to NSF 13-537 for complete information



NSF 13-537 Deadlines

- Letter of Intent Due Date (Required)
March 22, 2013, 5:00 p.m. proposer's local time
- Full Proposal Deadline
May 24, 2013, 5:00 p.m. proposer's local time



Background

George E. Brown, Jr. Network for Earthquake Engineering Simulation (NEES)

- MREFC during FY 2000-FY 2004
- Operations and research during FY 2005-FY 2014
- September 30, 2014
 - End of planned ten-year operations
 - End of five-year NSF cooperative agreement for NEES operations (FY 2010-FY 2014) with Purdue University (**incumbent**)

NSF 13-537 is open competition for “second generation” of NEES (NEES2) for FY 2015-FY 2019

- Outcome: **one award as a cooperative agreement** to a lead institution (**awardee**), start date of October 1, 2014 and award duration of up to five years
- Awardee provides and operates research infrastructure, but does not conduct research
- NSF separately funds researchers to use NEES2
- NEES is, and NEES2 will be, part of NSF’s portfolio of large, multi-user research facilities (note: NSF 10-12 now superseded by NSF 13-38)



Significant Changes from NEES to NEES2

NEES

- 14 earthquake engineering experimental facilities (MREFC)
- Data repository primarily for NSF-supported NEES research awards (experimental data)
- Wide variety of education, outreach & training activities
 - Separate NSF REU Site Award

NEES2

- 4- 6 earthquake engineering experimental facilities & post-earthquake, rapid response research (PERRR) facility
- Expanded data repository for all NSF-supported earthquake engineering awards (experimental and post-earthquake investigation data)
- Focused education & community outreach (ECO)
 - Integrated with/uses NEES2 resources
 - Embedded REU Site



NEES2 Ops PROGRAM DESCRIPTION

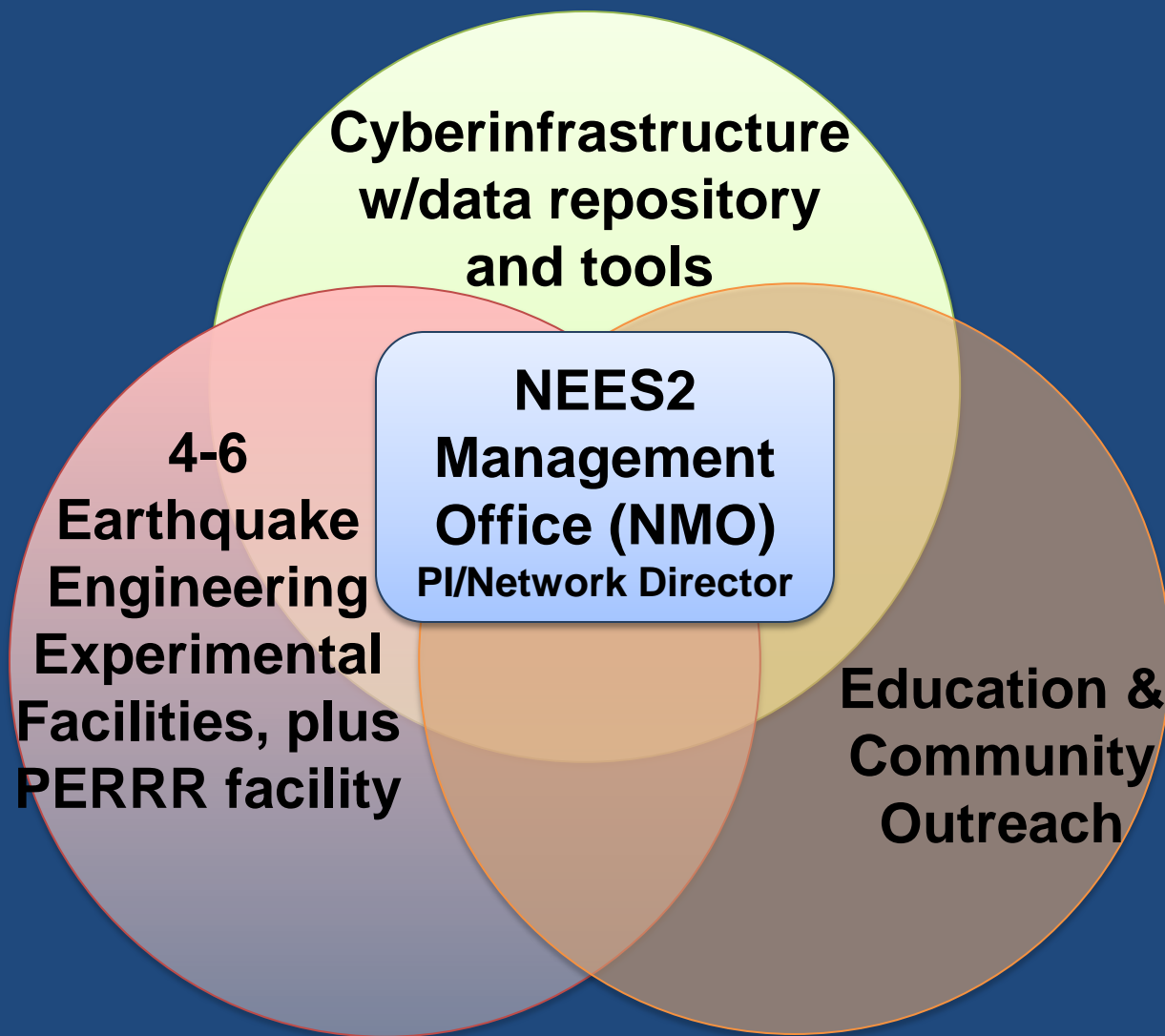


Goals for NEES2 Operations

- National and international leadership for multi-user, research infrastructure management and operations to enable transformative research for earthquake hazard mitigation,
- Major earthquake engineering experimental facilities that openly support access by external users,
- Community-driven, production-quality cyberinfrastructure that can accelerate research to innovation through the integration of user support, testing, data, computation, simulation, visualization, collaboration, and long-term digital preservation,
- Safe and secure experimental environment and cyberinfrastructure for users to conduct research and education activities,
- Effective education and community outreach (ECO) activities that lead to a broadly inclusive and active user base for NEES2 and next generation earthquake engineering workforce, and
- National and international partnerships that bring additional resources to NEES2 as well as to the partnering organizations.



NEES2 Scope: Major Components



Proposals must *integrate all components* into *cohesive* earthquake engineering research infrastructure for FY 2015-FY 2019



NSF 13-537 is not a competition for

- Proposals to establish a management organization for coordinating many/all earthquake engineering experimental facilities across the United States
- Proposals only to establish one new earthquake engineering experimental facility or an upgrade to an existing experimental facility
- Proposals only for cyberinfrastructure development or operations
- Proposals for conducting earthquake engineering research

Proposals submitted to NSF 13-537 must address the entire scope outlined in NSF13-537 Section II, Program Description



NEES2 Operations

Major Strategies and Implementation

- NEES2 Science Plan
- Strategic Plan and Performance Metrics
- Work Breakdown Structure (WBS)
- Annual Work Plans (AWPs)



NEES2 Science Plan - Vision

- Strategy for configuration of NEES2 resources
- NEES2 as enabler for *exciting, visionary, transformative multidisciplinary research* for earthquake engineering
 - Highest priority Grand Challenges and key research questions
 - Experimental data products and cyberinfrastructure needed to address this research
- **Unique, technically advanced** major experimental equipment and capabilities that *do not exist elsewhere in the United States at similar scale or capability*
- Portfolio demonstrates complementary and synergistic experimental and cyberinfrastructure capabilities
- Market analysis of anticipated user base
 - Active and inclusive user base beyond host/provider institutions



Strategic Plan, Performance Metrics, WBS, and AWP

- Strategic Plan and Performance Metrics
 - Vision, mission, goals, objectives, deliverables, key milestones, performance metrics and targets for the performance metrics for entire NEES2 operations
 - Strategies for building broadly inclusive user base, next generation earthquake engineering workforce, and national and international partnerships
- Work Breakdown Structure (WBS) and dictionary
 - Entire scope of NEES2 operations
 - Detailed scope for each NEES2 component
- Annual Work Plans (AWPs)
 - Based on Strategic Plan, WBS, performance metrics assessment, priorities, risk management, resource utilization, and availability of NSF support



NEES2 Management Office (NMO)/Lead Institution Responsibilities for NEES2

Vision, Leadership & Management

- Distinguished PI/Network Director
- Vision for NEES2 – Strategic Plan and Performance Metrics, NEES2 Science Plan, WBS, and network quality
- Active and broadly inclusive user base
- Organizational structure and qualified staffing
- AWP's and annual budget requests for each NEES2 component
- Network-wide coordination of
 - Experimental facility operations
 - Cyberinfrastructure
 - Education and community outreach
 - NSF-required reporting and reviews

Oversight

- Network-wide performance management system and performance metrics
- External advisory structure (membership selected post-award)
- Policies and procedures for NEES2 operations, user support, risk management, and financial management



Earthquake Engineering Experimental Facilities Research Capability Requirements

- All facility resources must be housed within the United States
- Facility's primary experimental capabilities and use are for earthquake hazard mitigation
- Facilities may have secondary capability to support research for mitigation of other natural hazards, and these experimental capabilities should be identified in the NEES2 Science Plan

Award will not support:

- Facilities to conduct fire testing
- With the exception of the PERRR facility, construction of new experimental facilities nor major refurbishments or upgrades to existing experimental facilities



Experimental Facilities: Responsibilities

- Experimental resources to support research by users
- Management, operations, and maintenance of all facility resources
- Organizational structure and qualified staffing
- Testing support for users
- Facility's resources must be available at least 80% annually for NSF-supported awards
 - NSF awards have priority access
 - Users scheduled transparently without prejudice
- Physical laboratory/equipment security and cybersecurity
- Environmental, safety and health plan
- Network integration with NMO and all partner organizations
- Informational web site - same format for all NEES2 facilities
- Education and community outreach: participate in network-wide REU program

Several award milestones (additional in solicitation)

- By end of first week of award, letter certification that on effective date of award, facility resources are fully functional and operational
- By end of first month of award, user fees/recharge rates posted on *each* facility's and NMO web sites



PERRR Experimental Facility

- Goal: transparently, efficiently, and effectively deploy resources for post-earthquake investigations nationally and internationally
- Must meet requirements and responsibilities for Experimental Facilities
- Data management infrastructure integral with NEES2 data repository and cyberinfrastructure
- External steering committee (membership selected post-award)
- Milestones
 - Year one: planning
 - Year two: procurement, commissioning, post-earthquake data repository operational as part of NEES2 data repository
 - Year three: user and safety manuals posted and community user training workshops



Cyberinfrastructure Requirements

- Community-driven, production-quality
- Near 100% uptime
- Baseline resources
 - Interactive web site
 - Data management infrastructure and policies
 - Interoperability with other databases
 - NEES2 data repository
 - Initially populated by all data in the incumbent's NEEShub Project Warehouse
 - Archive and curate experimental data generated from NSF-supported awards conducted during FY 2014 under the incumbent's operations
 - All experimental data under NSF-supported NEESR Planning Grant awards (NSF 13-544)
 - All experimental data generated by all NSF-supported earthquake engineering research awards
 - All data generated using PERRR facility resources
 - All data collected under NSF-supported post-earthquake investigation awards
 - Legacy data sets identified as high priority data by the earthquake engineering community
 - Experimental data from global partners in support of such partnerships
 - Robust data management tools



Cyberinfrastructure Requirements

- Baseline resources
 - Hybrid and multi-site hybrid simulation capabilities
 - Full suite of visualization, simulation, and computational tools
 - Collaborative tools for all stages of implementing a project using NEES2
 - Facilitated access to and use of campus and/or national high-performance computing resources
 - User requirements documentation, system architecture, and middleware
 - Identification of user community and stakeholders
 - Active and broadly inclusive user base
 - User manuals, training, and support
 - Network-wide identity, trust, and cybersecurity protocols and systems
 - Organizational structure and qualified staffing
 - Software management strategy, policy and procedures
- Continue >



Cyberinfrastructure: Requirements

- Utilize/adapt incumbent's NEEShub cyberinfrastructure content to new cyber platform as authors will permit
- Ensure all content, software, and tools can be fully transitioned to a future cyber platform without requiring renegotiation of proprietary agreements
- Maximize use of open source and COTS software
- Leverage NSF and other Federal agency investments in resources and tools
- Incorporate research and best practices in providing cyberinfrastructure for virtual organizations



Education and Community Outreach (ECO)

- Must use NEES2 resources
- Organizational structure and qualified staffing
- Capacity-building activities to develop the next generation of earthquake engineering researchers
- Research Experiences for Undergraduates (REU) site, as part of the award and annual budgets
 - NSF 12-569 has now been superseded by NSF 13-542
 - http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517
- Annual NEES2 community meeting
- Knowledge dissemination infrastructure
- Assessment for all ECO activities across NEES2



Year One Start-up, including Cyberinfrastructure Transition from Incumbent

- Period: October 1, 2014 to March 31, 2015
- Activities to implement start-up, with six-month transitional overlap in responsibility from the incumbent for cyberinfrastructure operations
- NSF will separately fund incumbent, as needed, to operate cyberinfrastructure during the transition
- High priority activities
 - Subawards to partner organizations
 - Delivery and implementation of production-quality cyberinfrastructure
 - End-to-end implementation of the NEES2 data repository



PROPOSAL PREPARATION

This webinar does not cover all NSF 13-1 GPG, NSF Grants.gov Application Guide, and NSF 13-537 proposal preparation instructions. Please read (and reread) these documents for additional requirements.



Eligibility Information

- **Organization Limit:**

Proposals may only be submitted by the following:
Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.

- **PI Limit:**

The PI, who will serve as the Network Director, must be a full-time employee of the lead institution by the effective start date of the NSF cooperative agreement award.



Eligibility Information

▪ **Limit on Number of Proposals per Organization: 1**

- An academic institution may submit only one proposal as the lead institution; however, an academic institution may participate in more than one proposal as a non-lead institution.
- Full proposals involving more than one organization must be submitted as a single administrative package from the lead institution; collaborative full proposals with multiple administrative packages will not be accepted and will be *returned without review*.
- If the lead Principal Investigator (Network Director) leaves or transfers to another institution during the review process or after an award is made, the proposal/award remains with the lead institution.
- The lead institution cannot be changed after submission of the full proposal.
- Non-academic U.S. institutions and organizations, including national laboratories and private-sector companies, as well as non-U.S. institutions, may participate in network activities using their own resources; however, this shall not be interpreted to prohibit purchases, services, or sales contracts/agreements with these entities.
- All NEES2 facility host institutions and facilities must be located in the United States to facilitate access by NSF-supported researchers.

▪ **Limit on Number of Proposals per PI: 1**

The Principal Investigator (PI) may serve as PI/Network Director on only one proposal.



Letter of Intent (LOI) - REQUIRED

- Due date: March 22, 2013, 5:00 pm local proposer's time
- Up to six pages – include all required information
- Two submissions required
 - FastLane LOI submission
 - PDF LOI submission via email to Lead Cognizant Program Officer (jpauschk@nsf.gov)
- NSF will acknowledge receipt of LOI via email to PI
- Full proposals can only be submitted by lead institutions that have submitted a complete LOI by the LOI due date



NSF 13-537 Resource Library

- Access
 - Proposing institutions/PIs who have submitted a LOI by the due date with all requested information and who request access
- Materials available, including any additional documents that may be added:
 - Incumbent's NEES Operations Annual Project Report and Work Plans
 - Cooperative Agreement between NSF and Purdue University during FY 2010-FY 2014
 - Incumbent's Subaward Monitoring Guidelines and Procedures
 - Incumbent's Risk Management Protocol
 - Incumbent's agreements with international organizations
 - Incumbent's cyberinfrastructure requirements traceability matrix
 - Incumbent's IT Product Contract up to NEEShub release 4.5
 - NSF Frequently Asked Questions (FAQs)



Full Proposal Preparation

- Full proposals may be submitted only by lead institutions that have submitted a complete LOI by the LOI due date (March 22, 2013, 5:00 pm proposer's local time)
- Full proposals from organizations that have not submitted a LOI by the due date will be *returned without review*
- Due to the complexity of the proposals being submitted, use of FastLane to prepare and submit full proposals is strongly encouraged

- ✓ **Important: READ NSF 13-1, Grant Proposal Guide (GPG), and note Summary of Changes effective January 14, 2013!**
- ✓ **Full proposals must comply with both NSF 13-537 solicitation requirements and NSF13-1 GPG/Grants.gov Application Guide requirements.**
- ✓ **Full proposals not compliant with NSF 13-537 and/or NSF 13-1 GPG/Grants.gov Application Guide will be returned without review.**



Deviations from NSF 13-1 GPG/NSF Grants.gov Application Guide

Full proposals **must comply** with the full proposal preparation guidelines specified in the NSF 13-1 GPG/NSF Grants.gov Application Guide, **and** the additional NSF 13-537 full proposal preparation instructions, which include deviations from the NSF 13-1 GPG/NSF Grants.gov Application Guide as follows:

- Project description length must not exceed 90 pages.
- Project description has a specified format and section headings that must be followed.
- Postdoctoral mentoring plan is not required, since postdoctoral researchers may not be supported.
- Additional information is specified for inclusion in the Facilities, Equipment, and Other Resources section.
- Additional information is specified for inclusion in the Special Information and Supplementary Documentation section.
- Additional Single Copy Documents must be provided.

This webinar primarily focuses on the sections above that have deviations.



Cover Sheet

- **FastLane** users
 - Enter program solicitation number NSF 13-537 in the program announcement/solicitation block
 - Select “George E. Brown, Jr. Network for Earthquake Engineering Simulation Operations FY 2015-FY 2019 (NEES2 Ops)” from the FastLane org. unit pull-down list
- **Grants.gov** users
 - Unit of Consideration: enter 07030000 for the Division Code and 7470 for the Program Code
 - Program solicitation number will be prepopulated on Cover Sheet



Project Summary

Limited to 1 page and must address within separate text boxes the Overview, Intellectual Merit, and Broader Impacts of the proposed activity



NEW Requirements for Project Description

NSF 13-1, GPG, Chapter II.C.2.d, Project Description, has been revised to implement changes related to the Content and Results from Prior NSF Support sections recommended by the National Science Board (NSB). The Content instructions were updated to provide contextual information about proposal preparation and to include revised language related to broader impacts of the proposed activities from the ACRA and the Board's report. In the past, the Project Description needed to include a description of broader impacts as an integral part of the narrative.



- ✓ The Project Description **must** now contain, as a separate section within the narrative, a discussion of the broader impacts of the proposed activities.
- ✓ This section also was updated to indicate that Intellectual Merit and Broader Impact activities **must** be described in two separate sections in the summary of Results from Prior NSF Support.



Project Description

- **Year-one work plans** must be presented in tabular format with the following column headings: WBS element, strategic goal, objective, brief activity description, deliverable, milestone, target performance metric, and responsible organization/staff.
- **Organizational charts** must show full first and last names, organizational affiliation, position title/role within NEES2 operations, lines of authority, and year-one, full-time equivalent (FTE) person-month effort (e.g., two months). Indicate existing personnel and personnel to be hired after the award is made.
- **Tables and lists** in the project description may be in a smaller type but proposers are responsible for ensuring that the type is readable when the page is printed out.
- **For all software** provided by NEES2 components that is open source, identify the open source license to be used when describing that software.



Project Description

Section 1. Summary Tables (not within 90-page limit)

- List of Participating Organizations (whether or not requesting support)
- List of Supported Project Personnel (requesting support)
- List of Other Project Personnel (not requesting support)

[Do **not** include names of External Advisory Committee and PERRR Steering Committee Chair/Members in proposal anywhere or in these lists.]

Section 2. NEES2 Science Plan

Section 3. Strategic Plan and Performance Metrics

Section 4. Work Breakdown Structure (WBS) and Budget Allocations

Section 5. NEES2 Management Office (NMO)

- Resources to be provided but not requesting support must be included in the Facilities, Equipment, and Other Resources section

Continue >



Project Description

Section 6. Experimental Facilities

- Tables
 - Prospective: year-one planned schedule for each major equipment component
 - Retrospective: past three years usage for each major equipment component
- Description of each NEES2 facility, including PERRR facility (up to 6 pages per facility)
 - Consistent order of information for all proposed facilities
 - Resources to be provided but not requesting support must be included in the Facilities, Equipment, and Other Resources section

Section 7. Cyberinfrastructure

- Resources to be provided but not requesting support must be included in the Facilities, Equipment, and Other Resources section

Continue >



Project Description

Section 8. Education and Community Outreach (ECO)

Resources to be provided but not requesting support must be included in the Facilities, Equipment, and Other Resources section

Section 9. Diversity Strategic Plan for NEES2 Operations Staffing

Requested table is optional; is only for staff who will receive support and are U.S. citizens and U.S permanent residents

Section 10. Results from Prior NSF Support

See new NSF 13-1 GPG requirements for this section – address

- Intellectual Merit
- Broader Impacts

Section 11. Other Supporting Information (optional)



Facilities, Equipment, and Other Resources

Descriptions must not include any quantifiable financial information about resources that will be available for NEES2

- Description of the NMO office meeting space and other resources provided at the lead institution, including Internet and Internet2 capabilities.
- Description of experimental facility resources that are not requesting support.
- Description of cyberinfrastructure resources that are not requesting support.
- Description of ECO resources that are not requesting support.

Continue >



Facilities, Equipment, and Other Resources

Descriptions must not include any quantifiable financial information about resources that will be available for NEES2

- For each proposed NEES2 facility, with the exception of the PERRR facility, provide the following information as pertinent to the facility:
 - One-page floor or site plan of laboratory
 - Up to eight photos of proposed NEES2 facility, with annotations
 - Facility network diagram
 - Internet and Internet2 connections
 - Data flow from source to local repository and from source to NEES2 data repository
 - Facility Inventory (equipment/experimental resources) and personnel and source of support (NEES2 Ops Award or Institutional User Fees/Recharge Rates)
 - Facility Data Summary Table, with format in solicitation (primarily retrospective information)



Special Information and Supplementary Documentation

Use the headings and page limits shown in solicitation

- A. Complete Work Breakdown Structure (WBS), Dictionary, and Budget Allocations
- B. Year One Start-up and Transition Plan
- C. Evidence of Lead Institution Capability (not to exceed five pages, exclusive of the CASB)
- D. Environmental Considerations
- E. Letters of Collaborative Arrangements
 - Only from participating individuals or organizations *not* requesting support
 - Must use the letter template provided
- F. Biographical Sketches of Additional Project Personnel (up to 10 additional personnel) requesting support



Single Copy Documents in Single Copy Section

- **List of Participating Organizations and Project Personnel**
 - Tables 1, 2, and 3 at start of Project Description
 - Submit tables combined into one text-searchable Portable Document Format (PDF) file in FastLane
- **Conflict of Interest List**
 - Ph.D. dissertation advisor and advisees
 - Collaborators or co-authors, including postdoctoral researchers, for the past 48 months
 - Co-editors within the past 24 months
 - Spouse or other relatives
 - Any other individuals with whom, or institutions with which, the PI(s), co-PI(s), Key Personnel, and other senior personnel have financial ties, including advisory committees (specify type), boards of directors, or prospective employees.
 - Submit list as text-searchable Portable Document Format (PDF) file in FastLane



Award and Budget Information



Anticipated Award Amount

- \$62,000,000 estimated total for up to five years
- Annual budgets

Award Year	Federal Fiscal Year (FY)	Annual Budget
One	2015	\$12,000,000
Two	2016	\$13,000,000
Three	2017	\$12,500,000
Four	2018	\$12,500,000
Five	2019	\$12,000,000

Notes:

- (1) Annual budgets include \$500,000 annual Major Equipment Repair Budget
- (2) Year two budget includes up to \$1,000,000 for PERRR facility resource procurement
- (3) Federal Fiscal Year (FY) starts on October 1 of preceding year, i.e., FY 2015 starts on October 1, 2014



Budgetary Information

- **Cost Sharing:** Inclusion of voluntary committed cost-sharing is prohibited.

- **Other Budgetary Limitations**
 1. Year-one budget includes all costs for start-up and transition from October 1, 2014 through March 31, 2015.
 2. Year-two budget includes one-time increase of up to \$1,000,000 for resource procurement for PERRR facility.
 3. Annual budgets include:
 - Major equipment repair budget of \$500,000, to support major equipment repairs across NEES2 facilities.
 - Travel funds for lead institution and NMO staff visits to each NEES2 facility and other major subawards at periodic intervals.
 - Travel funds to participate in up to three annual meetings for NSF-supported large facilities.
 - Participant support costs, not to exceed \$100,000 annually, for travel support for potential users to attend facility and cyberinfrastructure training workshops, who do not have current NSF support.
 - Participant support costs for REU site students.

Continue >



Budgetary Information

■ Other Budgetary Limitations (cont'd)

4. Funds from this award cannot be used to provide severance, retention, or bonus packages for any project personnel supported by this award.
5. Postdoctoral researchers may not receive support under this award.
6. Undergraduate students who are U.S. citizens, U.S. nationals, or permanent residents of the United States may be supported at the NEES2 facilities in an amount not to exceed \$12,000 in total annually for all undergraduate students per facility; this limit does not include the REU site students. Other undergraduate students may not be supported.
7. Graduate students who are U.S. citizens, U.S. nationals, or permanent residents of the United States may be supported to assist with the REU site program, or if approved by the cognizant NSF Program Officer, to support other NEES2 operations activities. Other graduate students may not be supported.

Continue >



Budgetary Information

■ Budget Preparation Instructions:

- The **full proposal** must include a budget for each of the five years. FastLane and Grants.gov will automatically provide a cumulative budget.
- Include separate budgets for subawards/subcontracts that are \$100,000 or greater annually.
- For subawards/subcontracts less than \$100,000 annually, include the costs aggregated on the subaward line of the annual budget.
- In the budget justification, provide a list of all organizations that will receive less than \$100,000 annually and the annual support provided to each organization.



NSF 13-537 Deadlines

- Letter of Intent Due Date (Required)
March 22, 2013, 5:00 p.m. proposer's local time
- Full Proposal Deadline
May 24, 2013, 5:00 p.m. proposer's local time
Given size of full proposal, plan to submit well before this deadline. Late submissions will not be accepted.



Merit Review Criteria and Process



NSF Merit Review Principles

- All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.
- NSF projects, in the aggregate, should contribute more broadly to achieving societal goals. These "Broader Impacts" may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified.
- Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects. If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.



NSF Merit Review Criteria

Intellectual Merit

- Encompasses the potential to advance knowledge

Broader Impacts

- Encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes

The following elements considered in review of both criteria:

1. What is the potential for the proposed activity to
 - a. Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
 - b. Benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?



Additional NSF 13-537 Solicitation Specific Review Criteria

- Degree to which NEES2 Science Plan provides the vision and resources to enable transformative research for earthquake hazard mitigation.
- Quality and comprehensiveness of the Strategic Plan and performance metrics to guide NEES2 operations.
- Effectiveness of the lead institution and NEES2 Management Office (NMO) structure and its key personnel to provide leadership, management, oversight, and responsibility for the operations and performance of NEES2.
- Comprehensiveness of the plan for performance management and assessment across NEES2.
- Quality and comprehensiveness of the work breakdown structure (WBS) and its associated dictionary to fully define NEES2 operations scope.

Continue >



Additional NSF 13-537 Solicitation Specific Review Criteria

- Extent to which each individual experimental facility provides high quality experimental and data management infrastructure, maintenance and operations, safety, staffing, and user services, and sufficient annual availability for use by NSF-supported awards.
- Extent to which the cyberinfrastructure provides community-driven and production-quality resources, including the NEES2 data repository, to enable transformative research in earthquake engineering, and qualifications of the staffing.
- Quality and appropriateness of the education and community outreach (ECO) activities for the intended audiences, and qualifications of the staffing.
- Appropriateness of the budget and sufficiency of the budget justification.
- Likelihood that an active and broadly inclusive user base will utilize NEES2 resources.
- Quality of the external advisory committee structure and the likelihood that structure will be an effective resource for guiding and overseeing NEES2 operations.
- Quality of the six-month start-up and transition plan, including capability of the NMO to assume full responsibility for cyberinfrastructure operations upon completion of the transition period without degradation of high quality services.



Merit Review Process

Proposals will be reviewed in accordance with standard NSF external merit review policy, which may consist of a combination of panel and ad hoc mail review.

Selected proposals may be further reviewed by site visits and reverse site visits. Dates for site visits will be communicated to selected PIs as early in the review process as practicable. These dates will be non-negotiable, and it is expected that key personnel will be available on the scheduled dates.

It is the responsibility of the PI to assure that contact information for the scheduling of these meetings is correct.

Travel and other costs incurred by proposers for this review process will be the responsibility of the proposers.

All PIs will receive documentation regarding the review process, including reviews and panel summaries, upon completion of the process.



Award Conditions Post-award Oversight Reporting



Award Conditions

- Award will be a cooperative agreement between NSF and lead institution, with the following award/special award conditions
 - Cooperative agreement will be administered by the Division of Civil, Mechanical and Manufacturing Innovation in the Directorate for Engineering and the Division of Acquisition and Cooperative Support in the Office of Budget, Finance, and Award Management
 - Award-specific programmatic terms and conditions
 - Award-specific financial/administrative terms and conditions
 - Standard cooperative agreement terms and conditions, including supplements for managers of Large Facilities
 - Termination for inadequate performance
 - Other programmatic and financial/administrative terms and conditions negotiated at time of award



Special Award Conditions

Award-Specific Programmatic Terms and Conditions

- Review and approval of specific awardee documents, notifications, and requests
- Site visit merit reviews
 - Six-month Transition (year one only)
 - Annual Operations Management
 - Site Visits of Individual Facility Operations, ~three annually.
- NSF Business Systems Review, within first two years



Special Award Conditions

Award-Specific Financial/Administrative Terms and Conditions

▪ Review and/or approval of the following:

- New subawards not approved as part of original award with a direct cost > \$100,000.
- Rebudgeting of \$100,000 or greater by the awardee or a subaward.
- Use of unobligated carryover funds from prior budget year not applied to next year's budget.
- Equipment repair/replacement exceeding the funds available in the Major Equipment Repair Budget (\$500,000 annually). If repair or replace cost exceeds the funds available under this award, then any additional NSF support to restore functionality would be based upon the cause of damage, prior equipment utilization history, remaining useful life of the equipment if repaired, future planned use of the equipment by NSF-supported projects, total cost of repair or replacement, quality of maintenance based on historical records, date and nature of original acquisition of the equipment, and availability of NSF funds.

▪ Program Income

- Non NSF-supported users cannot be supported by NEES2 Ops award; these users must pay institutional user fees/recharge rates to access NEES2 facility resources supported by NSF
- If a facility is utilized for NSF-supported awards at least 200 days annually (i.e., 80% based on a 250-day year), including routine maintenance and calibration time supported by the award, then the facility's institution may retain the program income earned during the remaining time to specifically further the NEES2 facility, per NSF approval. If the facility has more than 50 days of annual utilization by awards not supported by NSF, then NSF may require the use of program income to offset the NSF support.

▪ Award will not repair/replace equipment damaged or not operational prior to award start date

Continue >



Special Award Conditions

Standard Cooperative Agreement Terms and Conditions,
including supplements for managers of Large Facilities

http://www.nsf.gov/awards/managing/co-op_conditions.jsp?org=NSF

Termination: If lead institution, NEES2 facility, and any other supported partner organizations are found to be inadequately performing, then NSF reserves the right to recommend termination of the award, a NEES2 facility, or any other supported partner organization.

Programmatic and financial/administrative terms and conditions not listed above will be negotiated at the time of award.



Reporting Requirements

- Prior to each annual operations management site visit review by a panel of external experts, the awardee must submit a comprehensive annual project report to NSF containing a summary of the progress during the current year against the performance metrics and the work plan and budget for the next-year's funding increment.
- Quarterly interim reports will be submitted to track progress throughout the current year.
- End of project
 - Final project report
 - Project outcomes

Research.gov is NSF's electronic project-reporting system



Contacts

■ General inquiries regarding NSF 13-537

- Joy M. Pauschke, Program Director, Division of Civil, Mechanical and Manufacturing Innovation (Lead Cognizant Program Officer), phone: (703) 292-7024, email: jpauschk@nsf.gov
- Anna-Lee Misiano, Grants and Agreements Specialist, Division of Acquisition and Cooperative Support, phone: (703) 292-4339, email: amisiano@nsf.gov

■ Questions about use of FastLane

- FastLane Help Desk, phone: 1-800-673-6188; email: fastlane@nsf.gov

■ Questions about use of Grants.gov

- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via phone: 1-800-518-4726; email: support@grants.gov



Question & Answer Session

Submit questions via email to:

NEES2@nsf.gov

(This email alias is only active during this webinar)